



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D2891-1**Job Sheet 204693****Part No:** D2891-1**Job Qty:** 18 pcs**Part Name:** Support 2.25**Part Weight:** 0 lbs**Status:** New**Priority:** Medium**Job Created:** 12/17/19**Job Tracking No:****Due Date:** 1/20/20**Created By:** Marie Lajeunesse**Type:** Stock**Description:**

Note: DWG D2891 REV C IPP C 08.03.19 Re-format EC verified:DD/IPP Rev:E 11.08.04 as per dwg rev.B DD
verf:EC/IPP Rev.F 19.12.02 drawing revision DP Verify DD

Ship Via:**Bill of Materials****Job Routing**

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	HAAS 4 Axis	18 pcs	1/20/20		1.00	14.75	HAAS - 1		
							HAAS - 2		
							HAAS - 3		
							HAAS - 4		
110	QC 2	18 pcs	1/20/20		0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		
							QC 2 - 50		
							QC 2 - 51		
							QC 2 - 52		
							QC 2 - 57		
							QC 2 - 62		
							QC 2 - 63		

**Container No:** S259729**Part:** D2891 - 1**Job No:** 204693**Serial No/Batch:** S259729**Revision:** C**Inspector:****Exp Date:****Instructions:** Various STC's

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 03/02/20

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				QC 2 - 8	
				QC 2 - 66	
				QC 2 - 64	mm. 2020/03/01
				QC 2 - 65	
				QC 2 - 5	
				QC 2 - 71	
				QC 2 - 73	
				QC 2 - 69	
120	QC 8	18 pcs	1/20/20	0.00 0.00	QC 8 - 12
					QC 8 - 14
					QC 8 - 17
					QC 8 - 20
					QC 8 - 25
					QC 8 - 3
					QC 8 - 32
					QC 8 - 33
					QC 8 - 35
					QC 8 - 39
					QC 8 - 4
					QC 8 - 44
					QC 8 - 45
					QC 8 - 49
					QC 8 - 58
					QC 8 - 8
					QC 8 - 9
					QC 8 - 68
					QC 8 - 67
					QC 8 - 1 (A)
					QC 8 - 47
					QC 8 - 40
					QC 8 - 52
					QC 8 - 23
					QC 8 - 57
					QC 8 - 76
					QC 8 - 61
130	Crosstubes - 2 - B4B	18 pcs	1/20/20	0.00 0.85	Crosstubes - 1 - B4B
					Crosstubes - 2 - B4B
					Crosstubes - 3 - B4B
					Crosstubes - 4 - B4B
140	QC 3	18 pcs	1/20/20	0.00 0.00	QC 3 - 10
					QC 3 - 13
					QC 3 - 15
					QC 3 - 17
					QC 3 - 18
					QC 3 - 2
					QC 3 - 28
					QC 3 - 3
					QC 3 - 30
					QC 3 - 34
					QC 3 - 36
					QC 3 - 41
					QC 3 - 51
					QC 3 - 58
					QC 3 - 59
					QC 3 - 68
					QC 3 - 9
					QC 3 - 40
					QC 3 - 19
					QC 3 - 43

mm. 2020/03/01

DAS
41 MAR 07 2020
9-89DAS
40
9-89
MAR 23 2020

170 Packaging 3-1 - Stock - B4B 18 pcs	1/20/20	0.00 0.00	QC 3 - 24	
			QC 3 - 61	
			QC 3 - 81	
			Packaging 3 - 1 - B4B	
			Packaging 3 - 2 - B4B	
			Packaging 3 - 3 - B4B	
			Packaging 3 - 4 - B4B	
			Packaging 3 - 5 - B4B	
			Packaging 3 - 6 - B4B	
			Packaging 3 - 7 - B4B	
			Packaging 3 - 8 - B4B	
			Packaging 3 - 9 - B4B	
			Packaging 3 - 10 - B4B	
			Packaging 3 - 11 - B4B	
			Packaging 3 - 12 - B4B	
			Packaging 3 - 13 - B4B	
			Packaging 3 - 14 - B4B	
			Packaging 3 - 15 - B4B	
			Packaging 3 - 16 - B4B	
			Packaging 3 - 17 - B4B	
			Packaging 3 - 18 - B4B	
			Packaging 3 - 19 - B4B	
			Packaging 3 - 20 - B4B	
			Packaging 3 - 21 - B4B	DAS
			Packaging 3 - 22 - B4B	41 MAR 23 2020
			Packaging 3 - 23 - B4B	3-89
			Packaging 3 - 24 - B4B	
			Packaging 3 - 25 - B4B	
			Packaging 3 - 26 - B4B	
			Packaging 3 - 27 - B4B	
			Packaging 3 - 28 - B4B	
			Packaging 3 - 29 - B4B	
			Packaging 3 - 30 - B4B	
			Packaging 3 - 31 - B4B	
			Packaging 3 - 32 - B4B	
			Packaging 3 - 33 - B4B	
			Packaging 3 - 34 - B4B	
			Packaging 3 - 35 - B4B	
			Packaging 3 - 36 - B4B	
180 QC 21 - SA	18 pcs	1/20/20	0.00 0.00	QC 21 - SA - 21
				QC 21 - SA - 70
				QC 21 - SA - 53

Part Op 100 - HAAS CNC Vertical Machine - 1-Machine as per Folio FA046
 Descriptions: 110 - QC2- Inspect parts off machine FAI/FAIB
 120 - QC8- Inspect parts - second check
 130 - Crosstubes - Per note 8 on page 1 of dwg D2891, Prep inner concave surface of support and apply 3M Scotch-Weld as per dwg. 24H of cure time. *S206999 exp 8/21*
 140 - QC3- Inspect Part Finish
 170 - Identify as per dwg & Stock Location: *L6050* LOCATION : *L6052*
 180 - QC21- Final Inspection - Work Order Release

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
DSK076	D2891-1 Turning Detail	9 pcs (.5 ea)	100-HAAS 4 Axis	<i>S251416</i>

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-HAAS 4 Axis	DSK076	9	12	0

Part Specifications					
Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	2.250 Support	0.188Inches ± 0.000	0.000 0.188		
2	2.250 Support	0.240Inches ± 0.000	0.000 0.240		
3	2.250 Support	0.115Inches ± 0.000	0.000 0.115		
4	2.250 Support	0.040Inches ± 0.000	0.000 0.040		
5	2.250 Support	0.010Inches ± 0.000	0.000 0.010		
6	2.250 Support	0.240Inches ± 0.000	0.000 0.240		
7	2.250 Support	0.290Inches ± 0.000	0.000 0.290		
8	2.250 Support	0.115Inches ± 0.000	0.000 0.115		
9	2.250 Support	0.454Inches ± 0.000	0.000 0.454		
10	2.250 Support	2.779Inches ± 0.000	0.000 2.779		
11	2.250 Support	0.240Inches ± 0.000	0.000 0.240		
12	2.250 Support	1.002Inches ± 0.000	0.000 1.002		
13	2.250 Support	0.053Inches ± 0.000	0.000 0.053		
14	2.250 Support	0.257Inches ± 0.000	0.000 0.257		
15	2.250 Support	1.663Inches ± 0.000	0.000 1.663		
16	2.250 Support	0.053Inches ± 0.000	0.000 0.053		
17	2.250 Support	0.022Inches ± 0.000	0.000 0.022		

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DART AEROSPACE LTD		Work Order: 204693
Description: Ø2.250 Support	DAS 35 9-89	Part Number: D2891-1
Inspection Dwg: D2891	Rev: B/C	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	0.188	0.193		.190 Ø	.190 Ø	.190 Ø	.190 Ø	.190 Ø
AB	0.240	0.260		R.250 Ø	R.250 Ø	R.250 Ø	R.250 Ø	R.250 Ø
AC	0.115	0.150		.139	.139	.139	.139	.138
AD	0.040	0.060		.048	.048	.048	.048	.049
AE	0.010	0.020		.010	.010	.010	.010	.010
AF	0.240	0.260		R.250 Ø	R.250 Ø	R.250 Ø	R.250 Ø	R.250 Ø
AG	0.290	0.310		.305	.305	.305	.305	.300
AH	0.115	0.150		.125	.125	.125	.125	.126
AI	0.454	0.474		.465	.466	.466	.467	.466
AJ	2.779	2.789		2.784	2.784	2.784	2.784	2.783
AK	0.240	0.260		.243	.245	.243	.241	.242
AL	1.002	1.042		1.037	1.036	1.036	1.037	1.028
AM	0.053	0.073		R.063 Ø	R.063 Ø	R.063 Ø	R.063 Ø	R.063 Ø
AN	0.257	0.262		.259 Ø	.259 Ø	.259 Ø	.259 Ø	.259 Ø
AO	1.663	1.683		1.675	1.675	1.675	1.675	1.676
AP	0.053	0.073		R.063 Ø	R.063 Ø	R.063 Ø	R.063 Ø	R.063 Ø
AQ	0.022	0.042		R.032 Ø	R.032 Ø	R.032 Ø	R.032 Ø	R.032 Ø
AR								
AS								
AT								
Accept/Reject								

Measured by: LLM	DAS 64 9-89	Date: 2020/02/29
Audited by: JLM		Date: 20/03/06
Preliminary Approval:		Date:

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	
C	12.09.26	Dwg Rev updated	KJ	

DART AEROSPACE LTD		Work Order: 204697
Description: Ø2.250 Support	DAS 35 9-89	Part Number: D2891-1
Inspection Dwg: D2891	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1 6	1 2	8 3	9 4	10 5
HAAS Section								
AA	0.188	0.193		.190 Ø	.190 Ø	.190 Ø	.190 Ø	.190 Ø
AB	0.240	0.260		.250 R	.250 R	.250 R	.250 R	.250 R
AC	0.115	0.150		.125	.125	.126	.127	.126
AD	0.040	0.060		.050	.050	.050	.050	.050
AE	0.010	0.020		.010	.010	.010	.010	.010
AF	0.240	0.260		.250 R	.250 R	.250 R	.250 R	.250 R
AG	0.290	0.310		.296	.296	.300	.300	.300
AH	0.115	0.150		.128	.127	.139	.128	.127
AI	0.454	0.474		.466	.466	.466	.466	.466
AJ	2.779	2.789		2.783	2.782	2.784	2.780	2.782
AK	0.240	0.260		.250 R	.250 R	.250 R	.250 R	.250 R
AL	1.002	1.042		1.037	1.036	1.038	1.037	1.036
AM	0.053	0.073		.063 R	.063 R	.063 R	.063 R	.063 R
AN	0.257	0.262		.257 Ø	.257 Ø	.257 Ø	.257 Ø	.257 Ø
AO	1.663	1.683		1.676	1.675	1.677	1.677	1.676
AP	0.053	0.073		.063 R	.063 R	.063 R	.063 R	.063 R
AQ	0.022	0.042		.032 R	.032 R	.032 R	.032 R	.032 R
AR								
AS								
AT								
Accept/Reject								

Measured by: M. 64	Date: 2020/03/02
Audited by: J. 9-89	Date: 20/03/02
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	
C	12.09.26	Dwg Rev updated	KJ	

DART AEROSPACE LTD		Work Order: 204693
Description: Ø2.250 Support		Part Number: D2891-1
Inspection Dwg: D2891	Rev: B	Page 1 of 1

DAS
35
9-89

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1 1	1 2	1 3	1 4	1 5
HAAS Section								
AA	0.188	0.193		.190	.190	.190	.190	.190
AB	0.240	0.260		R.250	R.250	R.250	R.250	R.250
AC	0.115	0.150		.138	.139	.137	.138	.138
AD	0.040	0.060		.051	.050	.050	.050	.050
AE	0.010	0.020		.010	.010	.010	.010	.010
AF	0.240	0.260		R.250	R.250	R.250	R.250	R.250
AG	0.290	0.310		.300	.300	.300	.300	.300
AH	0.115	0.150		.126	.126	.126	.126	.126
AI	0.454	0.474		.465	.466	.465	.465	.465
AJ	2.779	2.789		2.785	2.784	2.784	2.784	2.784
AK	0.240	0.260		R.250	R.250	R.250	R.250	R.250
AL	1.002	1.042		1.022	1.021	1.022	1.022	1.022
AM	0.053	0.073		R.063	R.063	R.063	R.063	R.063
AN	0.257	0.262		.257	.257	.257	.257	.257
AO	1.663	1.683		1.674	1.677	1.674	1.675	1.675
AP	0.053	0.073		R.063	R.063	R.063	R.063	R.063
AQ	0.022	0.042		R.032	R.032	R.032	R.032	R.032
AR								
AS								
AT								
Accept/Reject								

Measured by: MLL	Date: 2020/03/02
Audited by: JML	Date: 20/03/06
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	
C	12.09.26	Dwg Rev updated	KJ	

DART AEROSPACE LTD		Work Order: 207693
Description: Ø2.250 Support		Part Number: D2891-1
Inspection Dwg: D2891	Rev: B	Page 1 of 1

DAS
35
9-89

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	16	17	18	19	20
HAAS Section								
AA	0.188	0.193		.189	.189	.189	.189	.189
AB	0.240	0.260		R.250 OK	R.250 OK	R.250 OK	R.250 OK	R.250 OK
AC	0.115	0.150		.138	.138	.137	.138	.138
AD	0.040	0.060		.049	.049	.050	.050	.050
AE	0.010	0.020		.010	.010	.010	.010	.010
AF	0.240	0.260		R.250 OK	R.250 OK	R.250 OK	R.250 OK	R.250 OK
AG	0.290	0.310		.300	.300	.300	.300	.300
AH	0.115	0.150		.126	.126	.126	.126	.126
AI	0.454	0.474		.463	.461	.461	.463	.463
AJ	2.779	2.789		2.783	2.783	2.783	2.783	2.783
AK	0.240	0.260		R.250 OK	R.250 OK	R.250 OK	R.250 OK	R.250 OK
AL	1.002	1.042		1.021	1.020	1.022	1.022	1.022
AM	0.053	0.073		R.063 OK	R.063 OK	R.063 OK	R.063 OK	R.063 OK
AN	0.257	0.262		.257	.257	.257	.257	.257
AO	1.663	1.683		1.676	1.675	1.674	1.674	1.674
AP	0.053	0.073		R.063 OK	R.063 OK	R.063 OK	R.063 OK	R.063 OK
AQ	0.022	0.042		R.032 OK	R.032 OK	R.032 OK	R.032 OK	R.032 OK
AR								
AS								
AT								
Accept/Reject								

Measured by: LM	Date: 2020/02/03
Audited by: JKL	Date: 20/03/06
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	
C	12.09.26	Dwg Rev updated	KJ	

Entered: _____ Date: _____

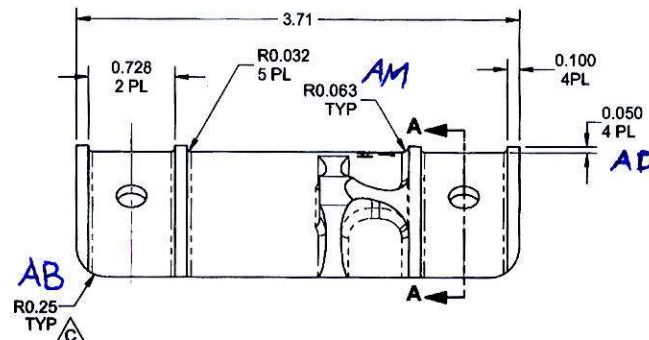
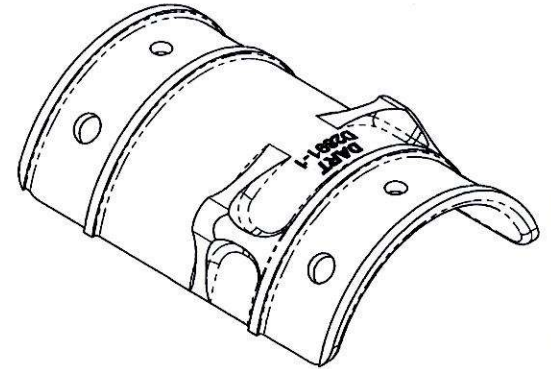
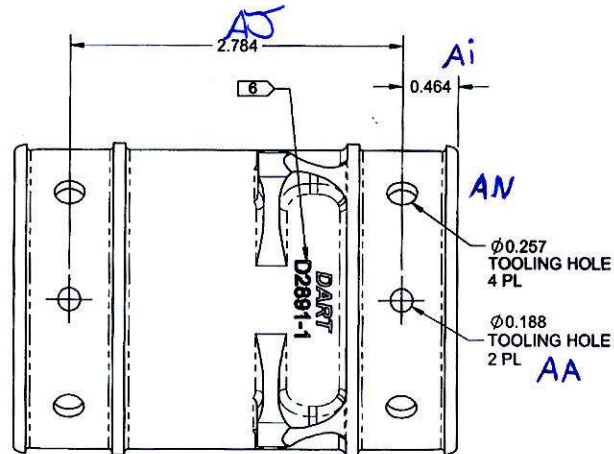


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

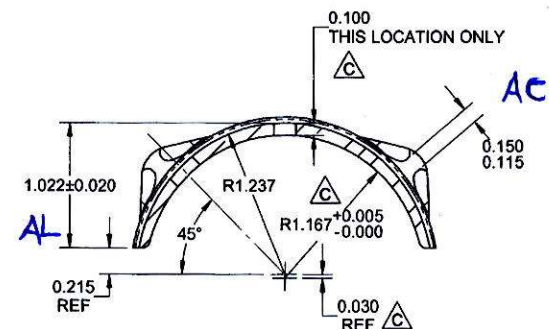
NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



D2891-1 SUPPORT



SECTION A-A

NOTES:

1) MATERIAL: 17-4 PH STAINLESS STEEL, H900 OR H925 CONDITION
MIN UTS = 170 KSI (38 HRC)
(REF DART SPEC. D6104)

2) FINISH: NONE

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: "DART" AND P/N IN THIS AREA WITH 0.125 HIGH LETTERING 0.010-0.020 DEEP, PER DART QSI 044 6.3.

7) WEIGHT: 0.35 lbs

8) FOR THE ENTIRE INNER CONCAVE SURFACE: ABRASE SURFACE WITH 400-GRIT SANDPAPER. REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY 0.03" THICK LAYER OF 3M SCOTCH-WELD 2216 B/A ADHESIVE TO MATING SURFACE OF SUPPORT. ALLOW TO CURE FOR 24 HOURS.

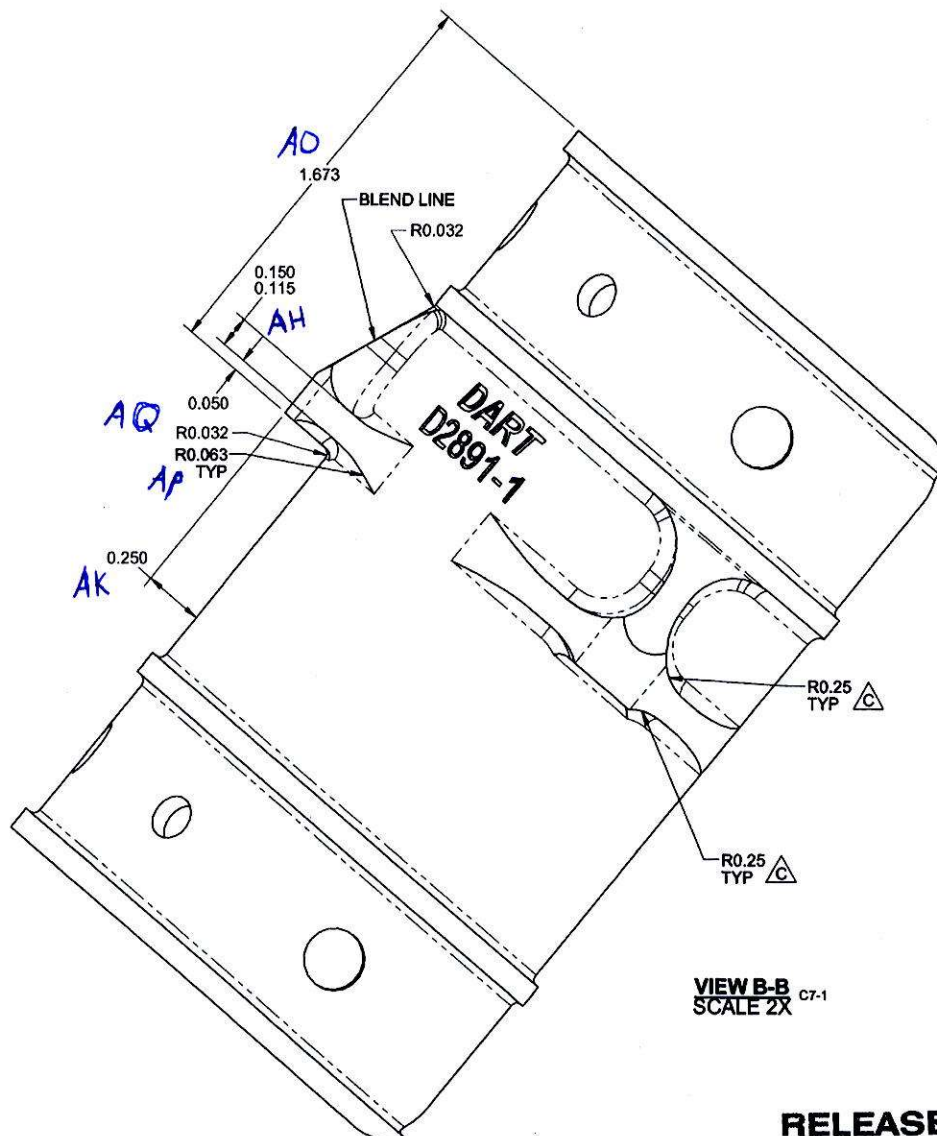
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2019 DEC 13
ECN 19-1307

C	REDRAW IN SW. CHG BORE (R1.167 WAS R1.137), 3M 2216 NOW 0.03" THICK, OPEN TOLERANCES	CP	19.10.01
B	RMV FINISH, ADD 3M 2216, ADD H925 MAT'L OPTION, UPDATE TOLERANCE	CP	11.07.15
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	CP		
CHECKED	MW	DRAWING NO. D2891	
MFG. APPR.	SAD	REV. C	
APPROVED	NO	TITLE	
DE APPR.	CP	Ø2.250 SUPPORT	
DATE	19.10.01	SHEET 1 OF 2	
		SCALE	
		NTS	

APPROVED

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VIEW B-B
SCALE 2X C7-1

RELEASED

2019 DEC 13 *47*

APPROVED

DESIGN	CP	DART AEROSPACE LTD	
DRAWN	CP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	MW	DRAWING NO.	REV. C
MFG. APPR.	SAD	D2891	SHEET 2 OF 2
APPROVED	NO	TITLE	SCALE
DE APPR.	CP <i>47</i>	Ø2.250 SUPPORT	NTS
DATE	19.10.01	COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	